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VIA OVERNIGHT COURIER

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Re: W.R. Grace's Comments Regarding EPA's Unilateral Administrative Order (Docket CERCLA 8-2000-10) and Comments on the Administrative Record

Dear Mr. Dodson:

This letter responds to your July 26, 2000 letter regarding W.R. Grace's comments, dated June 9, 2000, on EPA's unilateral order against Grace to conduct a removal action, and comments on the administrative record.[1] Nothing in EPA's letter changes our conclusion that the order to perform the time-critical removal action is arbitrary and capricious. In addition, EPA's action is otherwise not in accordance with law and is inconsistent with the National Contingency Plan. Grace's rationale is set forth in detail below.

I. There is No Imminent and Substantial Endangerment.

EPA has not satisfied the statutory prerequisites for issuance of an order under Section 106 of CERCLA. That provision authorizes an order only when "a release or threatened release of hazardous substances may present an imminent and substantial endangerment," and only "such relief as may be

[1] This letter is focused on the Export Plant removal action. Grace is simultaneously submitting separate comments that are focused on the Screening Plant and other aspects of the administrative record.

necessary to abate such danger or threat . . ." 42 U.S.C. § 9606(a). There must be some rational basis for the endangerment determination and must be some necessity for the particular action required. See e.g. *Price v. U.S. Navy*, 39 F.3d 1011, 1019 (9th Cir. 1994) (interpreting substantially similar provisions of RCRA § 7002).

A. EPA Failed to Follow the S&QAPP In Ordering the Removal Action.

EPA did not even follow its own Sampling and Quality Assurance Project Plan ("S&QAPP"), signed by the On Scene Coordinator and the Region 8 toxicologist on January 4, 2000, in making a decision to issue a Unilateral Administrative Order ("UAO") to Grace to conduct the Export Plant removal. (See AR Doc. No. 231897). The S&QAPP contains the criteria that EPA committed to use for determining whether a time-critical removal action would be required. S&QAPP at pp. 2, 4. According to EPA:

> The problem to be addressed by this study is that citizens of Libby appear to have an increased incidence of asbestos-related disease, but there are no data to determine if this disease is attributable solely to historic exposures, or whether current exposures are of continuing health concern.

S&QAPP, p. 5 (Emphasis added.) See also December 7, 1999 memo from EPA's contractor ISSI to Chris Weis (AR Doc. No. 335008) ("Because of the latency in onset of asbestos-related lung disease, it is likely that many of the disease cases observed in the community at present are related to historical inhalation exposures to asbestos"). The S&QAPP then states:

> The first decision to be made is whether or not time-critical intervention is needed to protect public health. If current exposures are not high enough to warrant time-critical intervention, the next decision is whether or not non-time-critical remediation is needed.

S&QAPP, p. 6 (Emphasis added).

EPA selected a risk level to be estimated from site-specific air monitoring data as the criteria for making this decision of whether time-critical action was needed. According to EPA:

> this Phase 1 study will use an excess cancer risk of about 1E-03 [$1x10^{-3}$] as the appropriate boundary for decision-making. That is, if asbestos levels in air correspond to an estimated cancer risk of about 1E-03 or higher, time-critical actions to identify sources and find appropriate and effective interventions will be considered. If estimated cancer risks from asbestos in Phase 1 air samples do not exceed a level of about 1E-03, then further studies may be pursued to determine if risk levels might exceed 1E-03 at other times or in other places, or if risks might exceed an acceptable chronic risk level (e.g., 1E - 04)

S&QAPP at p. 8. Thus, EPA acknowledged that the mere existence of current disease in the Libby population that is referenced in the administrative record does not indicate that asbestos present in site soils or in building dusts continues to pose an unacceptable risk to today's Libby inhabitants, much less that the soils/dust require immediate (i.e., "time-critical") removal.

Despite the clear decision criteria in the S&QAPP, EPA completely disregarded its own criteria in making the decision to order Grace to conduct the time-critical removal. In EPA's memorandum attached to the UAO, "Residual Mineral Fiber Contamination at the Former W.R. Grace Screening Plant and Export Plant Poses an Imminent and Substantial Endangerment to Public Health" (May 17, 2000), the maximum IRIS-based risk for any one sample from the Export Plant was 3×10^{-4}, which is 4 times lower than the risk criteria specified in the S&QAPP. The average IRIS-based risk for the Export Plant reported in the memorandum was 9×10^{-5}, which is 11 times lower than the criteria in the S&QAPP.[2] Furthermore, the theoretical cancer risks calculated by EPA's

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[2] The S&QAPP relies on the use of risk assessment methodology (Berman and Crump, 1999) that has not been validated inside or outside the Agency. This methodology is still undergoing revisions by its authors and is not scheduled to be issued for outside peer review until early 2001. Notwithstanding

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toxicologist using risk assessment methodologies other than IRIS ranged from 3 x 10^{-5} to 6 x 10^{-5}, which are 17-33 times lower than the time-critical removal action criterion established by EPA in its S&QAPP. (Weis May 17, 2000 memorandum, Table 3).

EPA's arbitrary reasoning is further illustrated by a careful examination of the results of the limited indoor air sampling supposedly used to justify the time-critical removal. As shown in the attached data summary, RJ LeeGroup, Inc. ("RJ Lee"), Analysis of December 1999 Indoor Air Samples from the Export and Screening Plants, Libby, Montana (September 27, 2000) (Attachment 1), the results of indoor air monitoring from the Export Plant were highly inconsistent, depending on who analyzed the samples, when they were analyzed, and by what method the fibers were counted. During the December 1999 indoor air sampling at the Export Plant, duplicate ("side-by-side") samples were obtained at each of the five sampling locations. RJ Lee analyzed one of the samples from each location using both ISO 10312 and NIOSH 7402 methods.[3] No asbestos risk

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[2](...continued)
the use of an unvalidated methodology, EPA's stated approach to making a time-critical removal action decision based on the results of a single sample is contrary to the Berman and Crump, 1999 risk methodology supposedly relied upon. As noted by Berman and Crump at p. 2-8, ". . . exposure estimates must be representative of actual . . . exposure," "the array of samples collected for estimating airborne asbestos concentrations must be representative of the exposure environment," and "the time variation of airborne asbestos concentrations must be properly addressed." (Emphasis added).

EPA ignored these requirements when it arbitrarily decided that even a single sample from inside a building would provide sufficient justification to order a time-critical removal of thousands of yards of soil outside the building. Ultimately, even this inappropriate and scientifically unjustifiable decision-making criterion was not met in this instance. Not a single sample -- indoors or outdoors -- met EPA's own criteria for a time-critical removal action.

[3] For the ISO 10312 counting, only Berman "protocol structures" were counted per Berman and Crump, 1999 (i.e., fibers with length >5 um and

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fibers were detected in any of the five samples, using counting criteria specified by either of the two methods. (See Attachment 1, Table 2.)

The EPA performed an "original" and "recount" of the other set of samples from each location and obtained different results on two of the five samples (EPA Sample Nos. 28134, 28140). In the other three samples (EPA Sample Nos. 28132, 28136, and 28138) no Berman and Crump, 1999 "protocol structures" were found in either the original or recount analyses. In one of the two samples with inconsistent results (EPA Sample No. 28134), no protocol structures were found in the original count, but one was found in the recount. In the second sample (EPA Sample No. 28140) two protocol structures were found in the original count but none were found in the recount. Thus, in these five samples, supposedly used to support EPA's time-critical removal action decision, only three fibers of the type required for the risk assessment required in the January 4, 2000 S&QAPP were found after four analyses of each sample performed by two different laboratories. Decision-making based on this approach is indefensible.

The UAO also attached the Health Consultation by ATSDR, dated May 17, 2000, which focused on factors that failed to address EPA's critical issue of "whether current exposures are of continuing health concern." It pointed to several "factors" at the Export Plant to "support the time-critical removal," none of which are relevant to the assessment of the potential impact of "current exposures." See Health Consultation at p. 5. One factor was the "percentage levels of asbestos in soils," yet the S&QAPP said that the decision on a time-critical removal action was to be based on "an estimate of airborne asbestos concentration and an estimate of cancer risk per unit concentration." S&QAPP at 7. EPA is currently in the process of planning a Performance Evaluation Study of methods for determining asbestos-concentration in soils, alleging that current available methods do not exist for making risk-based decisions regarding the potential impacts of asbestos-containing soils. Another factor was a reference to disease in individuals from the Libby area, but again the focus in the S&QAPP

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[3](...continued)
width <0.5 um). NIOSH 7402 specifies counting of fibers with length >5 um and width >0.25 um and <3 um that also have an aspect ratio (length to width ratio) of greater than three.

was to distinguish whether "this disease is attributable solely to historic exposures, or whether current exposures are of continuing health concern." Given the well-recognized and established latency between the onset of exposure to asbestos and the appearance of asbestos-related pulmonary disease, none of the "nearly 200 cases of asbestos-related conditions" can be related to current-day soil conditions. This is borne out by Dr. Whitehouse's summary of respiratory diseases he has observed from the Libby Area.[4] Dr. Whitehouse reported in a February 23, 2000 meeting in Cincinnati, Ohio that the individuals with asbestos-related disease that he has examined included 142 with occupational exposure, 29 non-workers with household contact, and 11 individuals with "non-traditional" routes of exposure, including a resident who lived near the processing facility, a logger who worked in the forest near the milling operation, an upholster who repaired seats in trucks used at the mining operation, and an individual who delivered diesel fuel to the mill on a regular basis. See AR Doc. No. 337990. It is obvious that none of these individuals had exposure histories that can be related to current-day conditions at Libby. The last factor -- the speculation that past exposures of the community would "suggest that additional exposures to the population would pose an unacceptable risk" from "vermiculite used in gardens, to insulate homes, and to pave driveways" -- was nothing more than a restatement of the original uncertainty acknowledged in the January 2000 S&QAPP regarding whether current conditions were resulting in unacceptable exposures to Libby residents. Again, this disregarded the S&QAPP in failing to focus on risk from air exposures at the Export Plant. Aside from disregarding EPA's own criteria, the possible presence of vermiculite in garden products, home insulation and driveways does not support a removal at the Export Plant.

While ATSDR earlier in its document also refers to the maximum concentrations at the Export Plant indoor air of 0.00028 f/cc and 0.00085 f/cc,

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[4] Based on available information, Grace is assuming that Dr. Alan Whitehouse is the "regional pulmonalogist" referred to in the ATSDR Health Consultation (page 5) and is the physician involved in the "Whitehouse cases" referred to by EPA. Grace has not had the opportunity to examine in detail the records for these reported cases. We refer to these cases as reported by Dr. Whitehouse only to illustrate that nothing in the record to date indicates that disease has or could occur in members of the Libby community from current day conditions.

which are significantly below the OSHA standard, ATSDR does not tie those levels to any cancer risk.

B. EPA's Reference to Three Studies Fails to Support the Removal Action.

EPA's July 26th letter alleges that "[t]here currently exists a body of scientific and medical information demonstrating that human exposure to the type and quantity of asbestos found at the Facility [Export Plant] may result in a permanent disabling disease and death," and that it has compiled "many of these studies in the administrative record." EPA later alleges under its discussion of "NCP Response Criteria" that "a review by physicians with the U.S. Public Health Service indicates that exposure to similar concentrations of Libby asbestos in the Minnesota, Marysville, OH, and Whitehouse cases caused sickness and death in both occupational and non-occupational settings." Contrary to EPA's allegations, Grace has found nothing in the administrative record for the Export/Screening Plants (released July 26, 2000) to support that current conditions at the Export Plant present such an exposure. Moreover, we find no reference at all in the U.S. Public Health Service May 17, 2000 Health Consultation or Dr. Aubrey Miller's May 15, 2000 letter to a "Minnesota" case.

In referring to the "Minnesota" case, Grace has had to surmise, since EPA does not refer to specific documents in the administrative record, that EPA is referring to the document authored by the Minnesota Department of Health, entitled Medical Screening for Asbestos-Related Lung Disease among Conwed Corporation (Cloquet) Workers and Their Spouses, Preliminary Report to the Minnesota Legislature (March 1, 1989) (AR Doc. No. 335487). Nothing in that report addresses exposures that would support the removal action at the Export Plant. The report concerned a company that manufactured asbestos-containing ceiling tile and wallboard at a Cloquet, Minnesota facility from 1958 to 1974. It does not identify the type of asbestos involved, although anecdotal reports refer to amosite and chrysotile asbestos (p. 55), and EPA ambient air studies conducted in the early 1970s in northeastern Minnesota as a result of mining activities reported only chrysotile asbestos. The study's findings regarding occupational exposures are irrelevant to the removal action ordered against Grace. That report contains no information about "quantities" or "concentrations" to which workers were exposed. (pp. 53 ["data on asbestos concentrations and fiber types at Conwed Corporation during the period 1958 to 1974 are not currently available to MDH"],

55 ["no indications of fiber counts were made]"). The author of the study could not even compare exposure conditions at the facility to other factories (p. 55). The study of non-occupational exposure of spouses, presumably through contact with contaminated work clothes (pp. 2, 51), is also irrelevant. In any event, the study concluded that "[t]he low prevalence of abnormalities among spouses suggests a much lower exposure and a relatively low risk of asbestosis or lung cancer," and the risk of mesothelioma was also "low." (p. 3). With respect to members of the general community (i.e., individuals other than the workers and their families), the report concluded that, "[i]f any excess risk exists, it is likely to be less, and probably substantially less, than the risk to spouses of Conwed workers, who as a group, would have experienced both ambient exposures and exposure to contaminated work clothing." (p.59)

The Minnesota Study also supports that, if current Libby residents have documented asbestos-related disease, such disease cannot be related to current exposures. The study concluded that:

> The prevalence of abnormalities was significantly elevated only for those employed early in the 1958-1974 period and for whom sufficient time has elapsed (latency) to permit development of abnormalities and disease. Few abnormalities were found among workers who started less than 25 years ago. Latency was found to be more important than the actual length of time that a person was employed within the 1958-1974 period. This long latency requirement is a well-established characteristic of most asbestos-related diseases including lung cancer, mesothelioma, asbestosis, and pleural abnormalities.

Minnesota Study at p. 2.

Information in the administrative record regarding the "Whitehouse" cases also does not include information on "concentrations of Libby Asbestos" that would support EPA's allegation that concentrations at the Export Plant may present an imminent and substantial endangerment. The information we have identified in the administrative record regarding the Whitehouse cases does nothing to address EPA's central question of whether "this disease is attributable solely to historic exposures, or whether current exposures are of continuing health concern." See AR Doc. Nos. 231350 (Portion of Dr. Whitehouse Deposition

dated December 14, 1999), 337990 (Libby Asbestos Exposure Scientific Council Meeting (February 23, 2000, Meeting Minutes - Draft)). In fact, as noted previously, according to Dr. Whitehouse's own description of individuals he has examined, their exposure histories are not at all related to present day conditions in Libby.

If EPA is referring to two documents in the administrative record regarding the Jorgensen case, the answers to interrogatories (AR Doc. No. 337987) and the affidavit by the plaintiff's toxic tort lawyer (AR Doc. No. 337988), those documents contain no information about concentrations or quantities of asbestos exposure or about the outcome of the litigation.

The Marysville, Ohio study similarly fails to draw a connection between exposures in Ohio and current conditions at the Export Plant. The O.M. Scott study focused on occupational exposures at a chemical fertilizer plant from exfoliated vermiculite received partly from the Libby mine. See AR Doc. No. 335474, Draft EPA, Priority Review Level I - Asbestos - Contaminated Vermiculite (June 1980). EPA can hardly compare occupational exposures at this fertilizer plant to the current conditions at the Export Plant. An epidemiological study entitled Lockey et al., Pulmonary Changes after Exposure to Vermiculite Contaminated with Fibrous Tremolite (1984), involved 512 employees, whose exposures were divided into low (chemical process, research, and front office areas), medium (central maintenance, packaging, and warehouse areas), and high (expanding, maintenance, and plant areas). AR Doc. No. 338252. See also AR Doc. No. 337944, EPA Health Assessment Document for Vermiculite (Sept. 1991) for a summary of the study. Prior to 1973, when exposures were generally high, the low exposure (i.e., "control") group 8-h TWA exposure was estimated at 0.049 fiber/cm^3; the medium exposure group ranged from 0.110 to 0.415 fibers/cm^3; and the high exposure group ranged from 1.264 to 1.511 fibers/cm^3. In 1974, when improved environmental controls were implemented and TWA exposure estimates decreased, the estimates ranged from 0.031 to 0.131 fibers/cm^3 for the medium exposure group and 0.212 to 0.375 fibers/cm^3 for the high exposure group. When cumulative exposures were calculated for these workers (i.e., air concentrations times years exposed) levels up to 7.55 fibers/cm^3-years were reported for the highest exposure group.

By way of comparison, using the highest concentration measured indoors at the Export Plant by EPA (0.0013 fibers/cm^3), and making the highly unlikely

assumption that a Libby resident working at this facility would be exposed to this maximum level for an entire 30 year employment history, his/her cumulative exposure would be 0.039 fibers/cm^3-years, which is over 190 times lower than the high exposure group in the Ohio plant. In fact, even the "control" group workers in the Ohio study had cumulative exposures that were over 10 times higher than this theoretical maximum exposed Libby worker.

Further illustrating the relatively high levels of exposures to the Ohio workers is the fact that peak asbestos levels were reported in that facility that are over 90,000 times higher than the highest level reported to date in the Export Plant indoor air by the EPA in their supporting documentation for the UAO. It is important to note that the authors concluded that the exposure levels in the study likely underestimated actual cumulative fiber exposure. Therefore, to cite this study as supportive of EPA's decision to remove thousands of yards of soil in the Libby community is inappropriate. If anything, the study supports the view that only higher concentrations of asbestos in air would justify a removal action. Furthermore, EPA's reference to the Ohio studies as being indicative of "sickness and disease" from asbestos exposure in "both occupational and non-occupational settings" is wrong.

It is interesting to note that, of the one hundred epidemiological studies regarding asbestos referred to in the Berman and Crump, 1999 risk methodology, these authors state that only fifteen "contain[ed] exposure data sufficient to derive qualitative dose/response relationships," and none of the fifteen were the Minnesota, Marysville, Ohio, or Libby cases.

C. EPA's Other Incorrect Allegations About the Alleged Imminent and Substantial Endangerment

EPA's statement in its July 26th letter that "there are . . . non-occupational exposures to asbestos in Libby that have caused asbestos-related disease" also does not support the removal action at the Export Plant. EPA would have to link the conditions at the Export Plant to the conditions that have resulted in the non-occupational exposures to support such an action. As noted previously, the "non-occupational" exposures reportedly linked to disease in Libby appear to be related exclusively to active mining or processing activities through exposure in the homes of worker family members or from other individuals living or working around these active facilities. In fact, it is extremely misleading for EPA to

confuse the public by vague and unqualified references to "non-occupational exposures," when much of the literature on such cases refer to members exposed to asbestos in their workplace and likely carrying home fibers in their work clothes. To imply that these data are relevant to present-day "non-occupational" exposure to asbestos in ambient air allegedly originating from soils is entirely inappropriate.

The letter from the Lincoln County Health Officer, dated July 21, 2000, after issuance of the unilateral order, also does not support EPA's action. First, it does not address the removal action at the Export Plant at all, stating only that the Lincoln County Health Officer supports "EPA involvement in evaluating the asbestos exposure in Libby, Montana" and "a thorough environmental assessment and appropriate remediation." He also refers to non-occupational exposures, but the letter has no information that such non-occupational exposures are similar to current conditions at the Export Plant. Indeed, the only specific alleged sources of such exposures are private yards, gardens, and a school running track, none of which are at issue in the UAO.

D. EPA's Approach to Other Asbestos Sites Belies Its Decision that a Time-Critical Removal Action Was Warranted.

The information in the administrative record regarding the California study of asbestos exposure from roads at the Diamond XX site highlights the arbitrary and capricious nature of the Export Plant removal action.[5] That study

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[5] We have attached additional documents for the administrative record regarding the asbestos-containing rock in California: the California Environmental Protection Agency Air Resources Board, Method 435, Determination of Asbestos Content of Serpentine Aggregate (adopted June 6, 1991) (Attachment 4); A California Air Resources Board ("CARB") Advisory on Asbestos-Containing Materials Used on Playgrounds and Other Sources (December 29, 1999) (Attachment 5); a California Environmental Protection Agency document called Naturally-Occurring Asbestos General Information (Attachment 6); a CARB Fact Sheet #1, Health Information on Asbestos (Attachment 7); CARB Fact Sheet #2, School Advisory for Naturally Occurring Asbestos (Attachment 8); CARB Fact Sheet #3, Ways to Control Naturally

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addressed asbestos contaminated rock which, according to documents in the administrative record, has been used extensively throughout California for paving roads and other surfaces, such as parking lots, driveways and school playgrounds. See A Modeling Approach to Estimate Community Exposures to Airborne Asbestos Concentrations from Reentrained Road Dust (AR Doc. No. 231419) at 2, 20, 23. According to this document, California has an estimated 700 miles and possibly thousands of miles of publicly-owned serpentine covered unpaved roads. Id. at 23. Unlike Libby, where EPA hurriedly ordered an expensive removal action, EPA spent several years studying the roadways and then performing a risk evaluation in order to determine if a removal action was warranted. EPA, as of 1995, was "requesting that more complete understanding of the health risks associated with each asbestos site be gained prior to any emergency response or removal action." Id. at 17. According to the author of the study, "[s]ince it would be prohibitively expensive for the ERS [the Emergency Response Section of EPA] to conduct removal actions at all asbestos road sites in California, the need to evaluate these roads based on their potential for contributing to public exposure and subsequently to health risks due to airborne asbestos is necessary." Id. at 23.

One of the sites investigated was the Diamond XX subdivision with 18 miles or 1,400,000 square feet of asbestos-contaminated rock and 300 residents. Id. at 23, 27. Residents stated that "they were exposed to very dusty

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Occurring Asbestos Dust (Attachment 9); CARB Fact Sheet #4, Naturally Occurring Asbestos Around Your Home (Attachment 10); CARB Fact Sheet #5, Monitoring for Asbestos (Attachment 11); CARB Asbestos Task Force, Findings and Recommendations on Naturally-Occurring Asbestos to El Dorado County (March 11, 1999) (Attachment 12); CARB Asbestos Air Monitoring in El Dorado County (Attachment 13); CARB Measured Ambient Asbestos Concentrations in Placer and Nevada Counties, California (Attachment 14); CARB Naturally Occurring Asbestos in El Dorado County (Attachment 15); Table 1, Measured Ambient Asbestos Concentrations in El Dorado, California (Attachment 16); CARB Table 1 Measured Ambient Asbestos Concentrations in El Dorado, California (Attachment 17); California Resources Agency, Asbestos Map of Western El Dorado County (Atachment 18); Map of California Showing Principal Asbestos Deposits (Attachment 19).

conditions" and "many of the school children walk to and from the school bus stop and ride bicycles on the unpaved roads." Id. at 27. In order to determine if a removal action was warranted, EPA conducted an extensive study involving: first, sampling and analysis of roadway material, which was performed a year after notification that roadways had up to 80% asbestos; second, determining that "there was a potentially significant threat to those persons having lung exposures to airborne asbestos"; third, air sampling involving controlled traffic conditions and four sampling stations to complete a meaningful risk assessment; and finally, a detailed risk assessment for individuals who live adjacent to or downwind of Diamond XX or who use the roadways for recreation and transportation. If the assumptions used by EPA were valid, the highest risks from road dust were on the order of 10^{-2} with the best estimates on the order of 10^{-3}. See EPA Evaluation of Risks Posed to Residents and Visitors of Diamond XX who are exposed to Airborne Asbestos Derived from Serpentine Covered Roadways (May 24, 1994) (AR Document No. 337939) at pp. 12, 14. The Diamond XX site therefore posed risks that, according to documents in the administrative record, appeared no less threatening than Libby, and, in fact, were considerably higher. EPA, however, appears to be much more careful in evaluating the need for a removal action when concerned about the ultimate impact on public, as opposed to private, resources. See, e.g., May 7, 1987 Memo from Tim Fields to Jeffrey Zelickson, Asbestos Contaminated Roads as a Nationally Significant Issue (AR Doc. No. 337979).

II. EPA's Invalid Attempts to Use NCP Response Criteria to Support its Decision.

A. EPA's Air Data in the Administrative Record Do Not Support the Removal Action.

EPA's discussion of NCP Response Criteria also provides nothing to substantiate that there may be an imminent and substantial endangerment to public health or welfare. Again, EPA fails to provide any ambient air sampling data indicating that asbestos is present in air at levels that would result in unacceptable exposure to the public who work at the Export Facility, visit the Facility, or live adjacent to the Facility. EPA, throughout its letter, refers to subsequent air data which EPA says "shows higher levels of asbestos in the indoor and outdoor air in and near the Facility than those previously reported." Grace has repeatedly asked EPA to put this data in an electronic and usable

format so that Grace can evaluate the data. On at least three occasions, these data were promised to Grace representatives, only to have the promise revoked at the last minute. The data made available to the public are in summary form only (See AR Doc. No. 344241). These tables contain inconsistencies preventing a complete understanding of the data. No raw bench sheets, diffraction patterns, EDS spectra, or other tabulations compiled by the analytical laboratory are available in the administrative record for review. EPA's failure to make available to the public the backup data for these summary tables prevents Grace and other stakeholders from assessing the significance of these data. For example, due to the fact that these summary tables include only fiber counts of significance to the unvalidated Berman and Crump, 1999 risk assessment methodology, it is impossible for anyone to assess the potential risks indicated by these data using any other risk assessment methodology, including EPA's own validated IRIS method. The risk assessment calculations performed by Dr. Weis on the original set of Export and Screening Facility air monitoring data cannot be made with the data as presented. The failure of EPA to provide such data impairs Grace's ability to comment on EPA's July 26th letter and on the administrative record as a whole. It is totally unacceptable for the EPA to refuse to provide full and complete access to all information related to the air monitoring performed in Libby during the last 10 months.[6]

In spite of this unwillingness to fully disclose relevant and pertinent information, there are ample data available to refute EPA's assertion that air monitoring data conducted since December 1999 demonstrate higher asbestos exposures to members of the public. These data, including data presented as recently as last week in the Asbestos and Public Health Conference held in Libby

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[6] On a related matter, there exists a "Libby Team Website," containing among other things, "Downloadable_Libby_Data." This database is accessible to a number of other stakeholders, including ISSI, ATSDR, CDM, DOT, EPA, HSRA, and MDEQ. See AR Doc. No. 33791. As a key stakeholder in this matter, Grace should have complete and unlimited access to any data relevant to any site for which EPA is asserting that Grace is responsible. We have legitimate concerns and interest in the outcome of the work being conducted in this community. It is inappropriate for EPA to prevent Grace's access to this important information, and the information should be in the administrative record.

by the EPA, show just the opposite.[7] During one of the conference presentations on September 22, 2000, Mr. Peronard presented a summary chart entitled, "Ambient Air Monitors - Structure Counts." See, Ambient Air Monitors - Structure Counts (Attachment 20). The chart presented summary results of ambient air monitoring performed by the EPA at various locations around Libby, including the Fitness Center/Town Hall, Plummer School, Millwork West (part of the Export Plant area included in the UAO), the Plainer Shed in the Export Plant, McGrade School, Jerry Dean Park, and City Hall. Samples were reported for May, June and July, 2000. **There were no tremolite-actinolite asbestos protocol fibers observed in any of the samples reported.** These results are similar to, and perhaps part of, the results presented in summary form in the July 2000 ISSI data base (AR Doc. No. 344241). Of the samples (air and dust) collected in the schools, no amphibole fibers longer than 5 um were observed. If there is a continuing exposure in Libby to amphibole fibers from the Export Plant, there should have been amphiboles in the air and dust from the schools and other community areas monitored. In fact, this is not the case, further illustrating the lack of justification for EPA's ordered time-critical removal action. Perhaps this is why in his presentation Mr. Peronard concluded "I don't see anything that indicates an ambient air problem in Libby right now." This is particularly noteworthy, since EPA's ordered soil removal at the Export Plant has not yet occurred.

Similarly, WR Grace arranged for the analysis by the RJ Lee of splits of indoor and outdoor air samples obtained by the EPA during January 2000 from various locations around Libby. These samples were analyzed using both NIOSH 7402 and ISO 10312 methods. See RJ Lee, Analysis of January 2000 Indoor and Outdoor Air Samples (September 27, 2000) (Attachment 2). The vast majority of the samples had no detectable asbestos concentrations using either counting method. The highest concentration measured in any of the samples using ISO 10312 counting criteria was 0.0007 f/ml. The highest using the NIOSH 7402 method was 0.0002 f/ml. Using the current EPA-validated unit risk factor for asbestos from IRIS (0.23 per f/ml), this maximum concentration would result in a lifetime risk (i.e., assuming someone is exposed 24 hours per day for 70 years to this maximum level) of only 5×10^{-5}, which is 20 times lower than the time-

[7] All materials presented at this conference and the video record of the conference should be formally included in the Administrative Record.

critical removal action risk level selected by the EPA in their S&QAPP. In reality, the actual risks to Libby residents, as shown by the air sampling conducted in their community during the last several months, is much lower than this. The majority of samples have detected no tremolite asbestos fibers in the community air. It is important to note that EPA's own analysis of these same air samples arrived at essentially the same results. With the exception of two air samples, no Berman and Crump (1999) asbestos protocol fibers were detected in any sample. These two samples were prepared using an indirect transfer procedure which is not permitted in the ISO 10312 protocol.

In addition, outdoor ambient air monitoring data at the Export Plant further call into question the basis for EPA's time-critical removal action order for this facility. During July 2000, air samples were obtained at seven locations located around the perimeter of the Export Plant area. See RJ Lee, Analysis of Summer 2000 Air Samples from the Export Plant, Libby Montana (September 27, 2000) (Attachment 3). These samples were collected during the conduct of routine business activities on the Export Plant property and were analyzed by RJ Lee. The fact that they were collected in July 2000 is noteworthy. In the month of July 2000 there was only 0.29 inches of precipitation, which is only one-fifth of the average precipitation during the last 10 years in the Kalispell - Missoula, Montana area. (See Attachment 21). The samples were obtained on July 27 - 29, 2000. No precipitation of any type had fallen in Libby for 18 days prior this sampling period, and then only 0.14 inches of precipitation was recorded. In spite of these extremely dry conditions, no tremolite asbestos fibers were detected in any of the samples. It is obvious that EPA's contention that the Export Facility soils pose a risk to human health is unfounded.

The conclusion from the currently available air monitoring data is clear. There is nothing to indicate that Libby residents are being exposed to unacceptable risks from tremolite asbestos fibers in the air of their homes, workplaces, schools, public facilities or general community. Paul Peronard apparently agrees with this conclusion. As noted previously, during last week's Asbestos Health Conference in Libby, Mr. Peronard stated the following regarding ambient (outdoor) air data, "I don't see anything that indicates an ambient air problem in Libby right now." Regarding the results of indoor air data obtained to date in the homes and business of Libby, Mr. Peronard stated that using current standard EPA risk methods, "I would assign no risk to the data I've

seen now." It is obvious that the situation in Libby overall and at the Export Plant in specific is neither imminent nor substantial.

In this light, it is interesting to note how differently similar public issues have been handled by other government organizations tasked with protection of public health. As discussed elsewhere in this letter, there are several areas in the State of California where naturally occurring asbestos, including chrysotile and tremolite, is found in the form of serpentine rock. It is especially abundant in the Coastal Ranges, the Klamath Mountains, and Sierra foothills, where it is commonly exposed near faults. In response to a series of 1998 articles published in the Sacramento Bee relating to the risks from naturally-occurring asbestos in El Dorado County, California, an Asbestos Task Force was convened that was comprised of participants from various governmental and educational institutions, such as the California Environmental Protection Agency (including the Air Resources Board or ARB), the U.S. Geological Survey, and the California Department of Health Services. One of the activities performed by the ARB was to conduct ambient air monitoring at 30 different locations in El Dorado County. In addition, the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) developed a unit risk factor based largely on epidemiological studies of workers exposed to amphibole fibers, and applied this factor to the results of the air monitoring. In many ways, the results of the air monitoring conducted in El Dorado County were similar to those observed in Libby. That is, the majority of samples found no asbestos, and about half of those that did, only had one asbestos fiber on the sample. However, unlike Libby, where ambient air samples from the community have not detected any asbestos, several of the community air samples in El Dorado County did. The OEHHA used these data and performed a risk assessment, conservatively assuming continuous exposure for 24 hours a day for 70 years. After conducting the risk assessment, OEHHA concluded, "Based on these monitoring results, it appears unlikely that the general population of El Dorado County is exposed to widespread, elevated asbestos levels from undisturbed, naturally-occurring asbestos." (See Attachments 5-19). EPA has chosen a different path in Libby. Instead of conducting a scientifically-based assessment of issues, the Agency ordered, without supporting information, removal of several thousands of yards of soil. As repeatedly pointed out in this and other correspondence with the EPA, this decision was arbitrary and capricious.

The EPA should not assume that the mere presence of asbestos in soils automatically means that those soils must be dug up and buried elsewhere to protect human health. Amphibole asbestos has been produced in Montana on a commercial scale from deposits near Karst Resort south of Bozeman. Serpentine asbestos occurs near Cliff Lake, but has not been produced on a commercial scale. See Montana School of Mines, Talc, Graphite, Vermiculite and Asbestos in Montana (1948) (Attachment 22). Grace wonders if EPA will order someone else to dig up the dirt near Bozeman or Cliff Lake, or if they will require soil removal throughout the State of California (See Attachment 19 for map of asbestos deposits in that state), or in the many locations in Fairfax County, Virginia, including numerous residential areas, where naturally occurring tremolite asbestos exists. See, Naturally Occurring Asbestos in Fairfax County (Attachment 23); Fairfax Health Department Directive 1, Standards for Performance for Actinolite/Tremolite Soil Sources (Attachment 24).

Furthermore, Grace has specific concerns regarding the methodology used to date for analysis of air samples. While some of the comments below relate to areas other than the Export Plant, they reflect the problems with EPA's sampling and analysis overall. The inconsistencies in the EPA summary table include (i) multiple listings for air samples (one line shows a 10 grid opening analysis, a second line a 30 grid opening – it is unclear which is correct or whether they should be combined into a 40 grid analyses), and (ii) incomplete summaries of the structure counts (e. g. sample 1-01329 shows a fiber with a diameter > 0.5 um, but no counts either < 0.5 um long or > 0.5 um long).

The TEM analyses were performed following the ISO 10312 analytical protocol. Sampling and analytical plans (AR Doc. Nos. 334968, 335009, 330512, 231901, 334985, 334988, 335010, and 338096) have all called for the use of NIOSH 7402, with the exception of Revision 1 of the Sampling and Quality Assurance Plan (dated 1/4/00). The analytical protocol was changed in the revision, but no mention was made of the change in the document revision log. As late as February, 2000 (AR Doc. No. 338096), sampling plans called for the use of NIOSH 7402.

There is no mention in the administrative record of the availability of ASTM D6281 (1998). This improved version of the ISO 10312 method was published in 1998. A member of the prime analytical subcontractor (Reservoirs)

is a member of the ASTM committee that developed the method and EPA should know of its existence.

B. EPA Fails to Respond to Specific Comments in Grace's Letter.

EPA's letter also does not respond to many of the specific comment in Grace's June 9, 2000 letter. For example, Grace commented that indoor air data have no relation to potential inhalation risks posed by Export area soils, that the California and Addison studies pertained to different conditions, that weight-based asbestos soil data have no value in making risk-based removal decisions, that weathered tremolite does not result in respirable asbestos, that virtually no fibers were found in the indoor air sampling (EPA's sampling showed three actinolite fibers between 5 and 10 microns in length and Grace's sampling showed none), and that indoor dust samples in buildings historically used for processing and/or storage of vermiculite cannot be used to support a removal action to pick up thousands of cubic yards of soil, and that community air data do not support EPA's decision to remove soil.

C. Other Problems with EPA's Decision to Undertake a Time-Critical Removal.

All of EPA's response criteria assume that a removal action is appropriate. Removal authority, however, "is mainly used to respond to emergency and time-critical situations where long deliberation prior to response is not feasible." 55 Fed. Reg. 8666, 8695 (1990), and generally is "short-term and mitigative in nature," 53 Fed. Reg. 51394, 51409 (1988). See also EPA, Guidance on CERCLA Section 106 Judicial Actions (February 24, 1989) (orders for removal action are used in "emergency circumstances which present an immediate threat to health, welfare, or environment, such as a fire or explosion.") EPA itself has referred to the actions in Libby as "fast-paced, short-term Superfund Emergency Removal Cleanup." See April 27, 2000 EPA letter to CAG (AR Doc. No. 279590). But, removal actions generally involve containment and stabilization that are completed within 60 days. 53 Fed. Reg. at 51469 (1988). See also 55 Fed. Reg. at 8806 (in discussing time-critical removal actions, EPA states that the overriding task of emergency response teams during this critical period may be the undertaking of necessary stabilization). These types of situations are not presented by the conditions at the Export Plant where EPA's own evaluation of risk showed an average risk of 9×10^{-5}, which is within the

acceptable range of permanent remediation goals. EPA is attempting to circumvent the process for true evaluation of risk by jumping to conclusions before adequate data and evaluation indicate that the expensive removal action ordered is justified.

The inappropriate nature of EPA's time-critical removal requirements are further illustrated by the requirement that these actions be "permanent," and by EPA's continued refusal to consider less costly, yet effective, actions such as capping. EPA states in its July 26, 2000 letter that it "does not believe it appropriate in this circumstance to impose permanent controls significantly limiting the use of a large parcel of land in the center of a small town." Thus, its rejection of an effective action such as capping the site[8] and acceptance of only a "permanent" remedy without allowing for the deliberative process of evaluation permitted in the regulations is arbitrary and capricious. The Agency is clearly circumventing its own regulations by requiring on a time-critical basis what it considers to be a "permanent" remedy. In reality, methods other than removal of soils could be just as effective in eliminating asbestos exposure in the vicinity of the Export Plant. For example, as discussed elsewhere, there are substantial areas in the state of California where asbestos-containing materials have been used for road and other surfaces. The Air Resources Board of California has made numerous recommendations to the citizens of California regarding how to mitigate potential exposures potentially associated with these surface materials. Specifically recommended for "Exposed Serpentine Areas" include "cover with 6 to 12 inches of non-asbestos material," "water wetting," "vegetative reclamation," and "asphalt cement paving." (See Attachment 9, Fact Sheet #3).

The arbitrary and capricious nature of EPA's requirement for soil removal is further illustrated in the June 13, 2000 memorandum from Paul Peronard, regarding "Designation of Areas to Be Excavated at the Export Plant and Screening Plant at the Libby Asbestos Site, Lincoln County, Montana". See AR Doc. No. 335006. Mr. Peronard correctly noted, "[t]here are not established numeric action levels or clean-up targets in terms of asbestos concentrations in soils or solid media for use at Superfund Removal sites." In the remainder of this memorandum, however, this obvious fact is ignored, and replaced by such

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[8] A cap or cover of the Export facility soils would completely eliminate an actual or perceived risk of airborne asbestos exposure.

unfounded statements as "[w]hile the levels of asbestos, and hence the risk the [sic] posed, at the Export and Screening Plants clearly warrant action, the risk at other areas in Libby, including at some of the areas surrounding the two former plants is not as clear," and "[t]aking this approach at the Libby Asbestos Site will allow for the elimination of the clear and obvious risks shown at the Screening Plant and Export Plant in the near term, while the questions over the long term, residual risk are resolved." As we have pointed out previously, however, EPA's own risk assessment approach to the Libby site as outlined in the S&QAPP shows that these supposed risks are neither "clear" nor "obvious."

In reality, the fundamental bases for EPA's soil removal decision, referred to by Mr. Peronard as "three basic points," are unfounded. Mr. Peronard's "basic points" include "[t]otal risk is proportional to the total mass of contaminants present," and "[r]emoval efficiency (and hence risk reduction) can be gauged as a function of the percentage mass of contaminants removed." In supporting these "basic points," Mr. Peronard makes repeated reference to other chemicals for which this may be true, such as mercury and PCBs (see p. 3), but provides absolutely no scientific justification related to asbestos. In contrast, when discussing methods for analysis of asbestos, Berman and Crump, 1999 noted:

> Factors that need to be addressed include the distribution of structure sizes, shapes, and mineralogy in addition to the absolute concentration of structures . . . . Thus, unlike the majority of other chemicals frequently monitored at hazardous waste sites, asbestos exposures cannot be adequately characterized by a single concentration parameter. (p. 3-3)

Berman and Crump provide further reasons why "total mass of constituents" is not a relevant consideration for asbestos in the following statements:

> Typically, the major components of the dust observed in most environments are non-fibrous, isometric particles. Fibrous structures consistently represent only a fraction of total dust. Asbestos structures represent a subset of the fibrous structures.
>
> [And]

> The major asbestos fraction of all such dusts are small structures less than 5μm in length . . . Fibrous structures longer than 5μm constitute no more than approximately 25% of total asbestos structures in any particular dust and generally constitute less than 10%.

(Berman and Crump, 1999; page 3-2)

Grace has stated previously (see June 9, 2000 letter to EPA) that bulk soil determinations provide no relevant information regarding risk and that only analyses that provide information regarding "distribution of structure sizes, shapes, and mineralogy in addition to the absolute concentration of structures" can be used for risk-based determination. This is obviously recognized by EPA since, as noted elsewhere in this letter, the Agency is in the process of designing and conducting a Performance Evaluation study aimed at developing and validating methods for analyzing asbestos in soil or other bulk materials using techniques and procedures that will allow for a risk-based assessment of the results.[9] Unfortunately, EPA has ignored the obvious and proceeded with the UAO requiring Grace to remove thousands of yards of soil delineated by unvalidated methodology, referred to by Mr. Peronard himself as "the somewhat arbitrary 1% by PLM approach." (see p. 2)

It is clear that sometime between January 4, 2000 (the date Mr. Peronard and Dr. Weiss signed the S&QAPP) and June 13, 2000, EPA abandoned its own risk-based criteria for time-critical removal action, and ignored its own air monitoring data and risk determinations.

III. EPA's Arbitrary and Capricious Decision to Disregard Risk Assessment.

EPA argues that requirements for feasibility studies in section 300.430(e)(2)(i)(A)(2) of the NCP do not apply. In any CERCLA action, EPA could try to

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[9] Mr. Peronard refers to this study in his June 13, 2000 memorandum, opining that the results of the effort "will give a better tool for characterizing the asbestos content in solid matrices in Libby." (See AR Doc. No. 335006, p. 2)

avoid the use of the acceptable risk range of 10^{-4} to 10^{-6} by categorizing an action as a removal action and not a remedial action. (See EPA's argument in its July 26, 2000 letter that Section 300.430(e)(2)(i)(A)(2) is a "remedial requirement and is not meant to apply to time-critical removals"). EPA, however, has consistently used risk assessments to justify removal actions at other sites, presumably because sites not posing an unacceptable risk should not be the focus of a removal action. See ICF Technology, Inc., Evaluation of Risks Posed to Residents and Visitors of Diamond XX Who are Exposed to Airborne Asbestos Derived from Serpentine Covered Roadways (May 24, 1994). (AR Doc. No. 337939) See also EPA, Guidance on CERCLA Section 106 Judicial Action (February 24, 1989). ("[A]n endangerment assessment or risk assessment, which is part of the record, will provide documentation for proof of an imminent and substantial endangerment, and may serve as the basis for a Section 106 administrative order or Section 106 complaint.")

EPA has stated its policy to conduct risk assessments for asbestos in its Superfund Method for Determination of Releasable Asbestos in Soils and Bulk Materials (EPA, 1997) ("[t]he statutory requirements of the Superfund program mandate that risk management decisions be based on risk assessment. Risk assessment requires that analytical data be relatable to health effects [and] . . . if asbestos measurements are to be related to risk, it is necessary to characterize sizes, shapes and mineralogy of the asbestos in each sample." (Emphasis added.) EPA now tries to disavow its Superfund Method for Determination of Releasable Asbestos in Soils and Bulk Materials by arguing that it is a draft. The document, which is in the administrative record, is not stamped "draft." EPA's consultant recommended it as an SOP for mixing, splitting, and collecting duplicate soil samples (See AR Doc. No. 211325), it is referenced in Figure 4 of the S&QAPP, and it is referenced in Berman and Crump, 1999.

EPA's discussion of risk levels is particularly baffling. EPA seems to reject its long-standing approach, specifically based on the NCP, that risk ranges of 10^{-4} to 10^{-6} are acceptable. It focuses on 10^{-6} risk level as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective. EPA's own guidance, Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions (April 22, 1991), however, states that:

> Where the cumulative carcinogenic site risk to an individual based on reasonable maximum exposure for both current and future land use is less than 10^{-4}, and the non-carcinogenic hazard quotient is less than 1, action generally is not warranted, unless there are adverse environmental impacts.

Congress could never have intended that EPA use emergency-type authority to force expensive removal actions, if a site falls within acceptable risk ranges. As Grace pointed out in its June 9th letter, Dr. Weiss has concluded that risk levels associated with airborne fibers in indoor air at the Export Plant are approximately 10^{-5}. The Agency's data simply did not support the extensive removal action being ordered.

EPA's letter also points to the provisions of the NCP regarding the use of risk levels when "ARARs are not available or are not sufficiently protective," and then argues that the OSHA occupational ARAR is not protective of residential settings. If EPA does not believe that the OSHA occupational ARAR is sufficient to protect those in a residential setting, a logical conclusion is that a risk assessment is needed.

In reality, the Agency inappropriately excluded the OSHA Permissible Exposure Limit (PEL) as an ARAR for the Export Plant. EPA's July 21, 2000 letter to Millwork West, the lessee of the Export Plant, informs it that "preliminary data indicates asbestos levels in air recorded in the break room of the planer building were at the present occupational exposure limit for airborne asbestos 0.1 fibers per cubic centimeter (the exact measurement was 0.099 f/cc which is functionally equivalent to the occupational limit)." The Export Plant is an occupational, not a residential, setting. Therefore, the OSHA PEL should have been used for decision-making at this facility. It is ironic that despite use of and notification to Millwork regarding this OSHA level, EPA referred to a level of .00113 f/cc in air in its UAO, and ATSDR referred to levels of 0.00028 f/cc and 0.00085 f/cc, both well below the OSHA standard, to try to support a removal action. See UAO § IV; ATSDR Health Consultation at p. 3.

EPA has absolutely no basis for stating that "[w]hile medical conditions resulting from such exposure [of people living and working near the Facility] would not become obvious for many years, the effect remains real, debilitating and deadly." EPA neither has sampling data nor a risk assessment to support

such incendiary statements, particularly when Dr. Weiss concluded that average risk levels associated with the Export Plant are 9×10^{-5}.

EPA further attempts to ignore its own monitoring data in its July 26th letter, referring to the data as "the first steps of a risk model based on preliminary air sampling collected during our investigations in Libby." It then incorrectly states that "[n]onetheless, Dr. Weis' analysis with this limited data set also supports the conclusion that people in and around Libby are being exposed to unsafe levels of asbestos fiber." In fact, as noted elsewhere, Dr. Weis' analysis shows just the opposite.

IV. EPA's Discussion of Analytical Issues Does Not Justify Its Decision.

EPA's order to conduct an expensive soil removal based, depending on the criteria for counting fibers related to risk, on only one to four fibers identified in individual indoor air samples at the Export Plant (which were not identified by Grace's sampling) is, no doubt, unprecedented. Grace challenges EPA to point to any time-critical removal action that has ever been conducted based on such analytical results. EPA's statement that "the identification of a full range of different size airborne fibers in many sampling locations raises EPA's concern about asbestos fibers around the area targeted for removal action this summer" may warrant additional sampling, but not an order to remove thousands of cubic yards of dirt.

With respect to ISO Method 10312, contrary to EPA's commitment to Grace, EPA has never provided the document setting forth the complete rationale that EPA claims supports the use of this method and has never provided a list of the scientists that EPA claims it coordinated with in selecting this method.

We question why EPA believes that "fibrous materials within the solid samples have high electrostatic surface charges, which cause the fibrous material to aggressively be attracted and cling to clothing, gloves, skin and other material." If fibrous materials in soils have a high electrostatic surface charge, such materials would not migrate, contrary to EPA's unsupported conclusion.

Grace agrees that the observation of a nine year old girl smashing a rock on the ground is "not scientifically determinative."

V. EPA Failed to Consider Other Alternatives and Required a Scope of Work Contrary to CERCLA.

A. EPA's Arbitrary and Capricious Order of Time-Critical Removal Circumvented the NCP Provisions for Careful Deliberation.

EPA states that the expensive response ordered is a "permanent remedy for the Export Plant." See July 26, 2000 EPA letter at p. 6. Before such expensive and permanent actions are selected, CERCLA provides opportunities for public comment and requires, among other things, careful consideration of effectiveness, implementability and cost. EPA instead rushed to order prematurely an arbitrary and capricious removal action. This strategy has resulted in EPA quickly disregarding a cap without conducting a careful evaluation and dismissing short-term effectiveness by brushing off Grace's concern regarding exposure from excavation activities.

Even categorizing the removal action as a non-time-critical action would have allowed more careful deliberation and an opportunity for Grace and other interested persons to comment prior to selection of any action. Non-time-critical removal actions are used when there is a 6-month available planning period; high cost relative to the statutory limit of $2,000,000 requiring careful deliberation and public comment; and lack of any immediate health threat such as fires, explosions, or leaking containers of highly toxic substances. They differ markedly from time-critical removal actions in requiring an engineering evaluation/cost analysis (EE/CA). 40 C.F.R. § 300.415(b)(4).

At least a 6-month planning period existed to evaluate the site, based on EPA's involvement at the Libby Site, some examples of which is set forth below:

- 1970's - EPA's knowledge of the Libby vermiculite issues dates back to the late 1970's when EPA's Office of Toxic Substances (OTS) began reviewing alleged health risks associated with vermiculite mining (see Attachment 25, Summary of OPPT's Role, available at http://www.epa.gov/opptintr/asbestos/verm.htm).

- June 1980 – EPA completes a Priority Review Level 1 – Asbestos Contaminated Vermiculite (AR Doc. No. 335474). The Level I

review considered the risks associated with material mined at the Libby facility. Senior EPA officials recommend that EPA undertake a preliminary analysis of regulatory control options.

- 1982 – An EPA contractor releases a report concerning its sampling of air around the Libby Screening Plant, mine, and public areas (AR Doc. No. 335486).

- 1983 – EPA evaluates Grace submission under TSCA Section 8(e), AR Doc. No. 335476.

- 1985 – An EPA contractor releases a report concerning its assessment of exposure to asbestos contaminated vermiculite (AR Doc. No. 335044).

- 1986 – EPA proposes its Asbestos Ban and Phase Out Rule (ABPO) as 40 CFR Part 763 (AR Doc. No. 335488). EPA determines that risks associated with asbestos contaminated vermiculite are not a high priority.

- 1987 - EPA seeks information from Grace regarding its vermiculite production plant in Libby for purposes of considering the need for national emission standards for hazardous air pollutants for sources of asbestos (Attachment 26).

- 1991 – EPA prepares a Health Assessment Document for Vermiculite (AR Doc. No. 231448). Data from the Libby site is included in this report.

- November 1992 – EPA Region VIII issues an opinion to the Montana Superfund Program that Asbestos NESHAP does not apply to asbestos contaminated vermiculite tailings used as road material at the Libby site (AR Doc. No. 335021).

- 1994 – EPA Region 8 states in press release relating to an alleged demolition matter that "Libby residents are not at current risk from the site." (AR Doc. No. 231448)

- November 1999 – EPA conducts Removal Site Evaluation of the Libby facility.

- May 1999 – EPA initiates time-critical removal action at the Screening Plant and issues Unilateral Order for a time-critical removal action at the Export Plant.

Similarly, the administrative record (AR Doc. No. 335023) contains results of air monitoring conducted in the summer of 1991 in the Libby area, including the Highway 37 Junction, Dam/Pond Midpoint, Truck Runout, Tailing Dam, and Jackson Creek. Average PCM asbestos concentrations from this monitoring ranged from 0.0005 to 0.005 f/cc. These data were provided by Grace to the Lincoln County Sanitarian in Libby. It is unclear why these 1991 data apparently prompted no action, while air monitoring data conducted in the winter of 2000 showing very similar results (PCM equivalent concentrations from samples obtained inside Export Facility buildings ranged from 0.0003 to 0.001 f/cc) prompted a UAO requiring time-critical removal of soils.

This chronology demonstrates that EPA has been extensively involved at the Libby Site since CERCLA became law in 1980. This 20-year involvement at the Libby site certainly exceeds the 6-month minimum time that supports a non-time-critical removal over a time-critical removal. The administrative record does not describe any conditions at the site that changed between 1980 and 2000 requiring a time-critical removal instead of a non-time-critical removal.

The immediacy of the threat outlined by EPA in the Action Memo is clearly contrived given EPA's own estimate of 10^{-5}, based on the indoor air sampling. In fact, there is no immediate threat associated with asbestos emissions from the Export Plant. There is no fire, likelihood of explosion, or other event that could contribute to the release of asbestos fibers above and beyond the amount that has been released, if at all, since EPA first became aware of the site in the 1980s.

Again, the risk issues at the Libby site are not clear, not immediate, and do not require a time-critical removal to address. The overall lack of clarity with respect to risk required EPA to consider any necessary removal action, if at all, in the context of a non-time-critical removal rather than as a time-critical

removal. EPA did not do this, and hence, acted in a manner that is arbitrary and capricious.

The Administrative Record also does not address why the Libby site is different from other sites in Region VIII where non-time-critical removals were used to address releases of hazardous substances. For example, Region VIII authorized the Arbiter Non-Time-Critical Removal and the Beryllium Non-Time-Critical Removal at the Anaconda Smelter Site in Deer Lodge Valley, Montana. Both of these non-time-critical removals addressed source areas on the Anaconda facility.

B. No Statutory Authority Supports EPA's Requirement to Force Grace to Pay for Relocation of a Business.

Aside from these flaws in EPA's action, EPA has no statutory authority to require Grace to pay money to the lessee and owner of the Export Facility. CERCLA, on its face, does not authorize payment for relocation of businesses as part of a removal action. Only the definition of remedy "includes the cost of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition off-site of hazardous substances, or may otherwise be necessary to protect the public health or welfare." 42 U.S.C. § 9601(24) (Emphasis added.) The term "removal" does not similarly provide for relocation of business facilities. Id. § 9601(23).

Specific provisions of 49 C.F.R. Part 24 confirm that only remedial actions conducted by the federal government are contemplated by these regulations. See 49 C.F.R. § 24.1(b) (part 24 applies only to "persons displaced as a direct result of Federal or federally-assisted projects"); § 24.2 (definition of "initiation of negotiations" refers only to permanent relocation under CERCLA; definition of "program" or "project" means "any activity or series of activities

undertaken by a Federal agency or with Federal financial assistance received or anticipated in any phase of an undertaking in accordance with the Federal funding agency guidelines.")

Very truly yours,

Kenneth W. Lund

KWL:sjc